ANDREWS ENGINEERING, INC.

August 6, 2012

Mr. Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Re: 2018080001—Winnebago County
Winnebago Landfill
Permit No. 1991-138-LF
Permit Log No. 2012-133

Dear Mr. Nightingale:

On behalf of our client, Winnebago Landfill, submitted herein are an original and three copies of Addendum 2 to Illinois EPA Log No. 2012-133. Addendum 1 was submitted on May 9, 2012 in response to an Illinois EPA incompleteness letter dated May 8, 2012. The original application was submitted to the Illinois EPA on April 13, 2012 with the applicable signed application forms.

This addendum is being submitted in response to a draft deficiency letter received from the Illinois Environmental Protection Agency (Illinois EPA) via email on July 31, 2012. In the following narrative, the specific reason for the draft deficiency is presented in a **"bold font"** followed by the response in "standard font."

1. **The applicant is inaccurate in stating that "upgradient well R22S was inadvertently omitted from Condition VIII.26." In fact, R22S was intentionally omitted from the condition. In his review memo for Application Log No. 2010-152, Stephen Williamson lists multiple reasons why well R22S was not included in Condition VIII.26.**

   a.) **All of the current interwell AGQS values for the subject unit were developed using the groundwater results from upgradient wells R11S, G11D, G13S, G13D and G22D.**
   b.) **The groundwater results from upgradient well R22S were not used in calculations developing the permitted interwell AGQS values for the subject unit.**
   c.) **Upgradient well R22S is screened in a different geologic material which does not adequately represent the geologic strata in which the other five upgradient wells are screened.**
   d.) **The groundwater concentration results from upgradient well R22S have historically been above the permitted interwell AGQS value for dissolved chloride.**
   e.) **Upgradient well R22S has been classified as having spatial variability.**

Well R22S is not a representative upgradient background well to be pooled with wells R11S, G11D, G13S, G13D, and G22D for the previously stated reasons. The interwell AGQS value for dissolved chloride shall be revised using only the data from upgradient wells R11S, G11D, G13S, G13D, and G22D.

Data from upgradient well R22S has been removed from the statistical dataset used to calculate the revised interwell AGQS value originally proposed for dissolved chloride. The revised interwell AGQS value and statistical calculations are provided in Attachment A.

Please contact Tom Hilbert at (815) 963-7516 if you have any questions or require additional information.

Sincerely,

Teresa N. Sharp

Teresa N. Sharp
Environmental Scientist

TNS:bjh:slm

Enclosure(s)

cc: Tom Hilbert – Rock River Environmental Services
Bernie Shorle – US EPA Region 5

Attachment 1
Revised Statistical Calculations

Winnebago Landfill
Southern Unit
Interwell AGQS Statistics
Dissolved Chloride

Outlier Analysis

Parameter Name	Units	G11D 1Q11	G11D 2Q11	G11D 3Q11	G11D 4Q11	R11S 1Q11	R11S 2Q11	R11S 3Q11	R11S 4Q11	G13D 1Q11	G13D 2Q11	G13D 3Q11	G13D 4Q11	G13S 1Q11	G13S 2Q11	G13S 3Q11	G13S 4Q11	G22D 1Q11	G22D 2Q11	G22D 3Q11	G22D 4Q11	Number of Samples	Mean	Standard Deviation	Critical Values
Chloride, dissolved	mg/L	34	38	4	33	32	44	4.6	32	350	200	200	220	120	150	170	190	240	280	300	300	20	147.08	113.2904121	2.557

$T = (X\text{-}X_{mean})/SD$, where X = sample result

Parameter Name	Units	G11D 1Q11	G11D 2Q11	G11D 3Q11	G11D 4Q11	R11S 1Q11	R11S 2Q11	R11S 3Q11	R11S 4Q11	G13D 1Q11	G13D 2Q11	G13D 3Q11	G13D 4Q11	G13S 1Q11	G13S 2Q11	G13S 3Q11	G13S 4Q11	G22D 1Q11	G22D 2Q11	G22D 3Q11	G22D 4Q11
Chloride, dissolved	mg/L	-1	-0.96	-1.263	-1.007	-1.016	-0.91	-1.258	-1.016	1.791	0.467	0.467	0.644	-0.239	0.026	0.202	0.379	0.82	1.173	1.35	1.35

Outlier = $T > T_n$

Parameter Name	Units	G11D 1Q11	G11D 2Q11	G11D 3Q11	G11D 4Q11	R11S 1Q11	R11S 2Q11	R11S 3Q11	R11S 4Q11	G13D 1Q11	G13D 2Q11	G13D 3Q11	G13D 4Q11	G13S 1Q11	G13S 2Q11	G13S 3Q11	G13S 4Q11	G22D 1Q11	G22D 2Q11	G22D 3Q11	G22D 4Q11
Chloride, dissolved	mg/L	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

ND Analysis

Parameter Name	Units	G11D 1Q11	G11D 2Q11	G11D 3Q11	G11D 4Q11	R11S 1Q11	R11S 2Q11	R11S 3Q11	R11S 4Q11	G13D 1Q11	G13D 2Q11	G13D 3Q11	G13D 4Q11	G13S 1Q11	G13S 2Q11	G13S 3Q11	G13S 4Q11	G22D 1Q11	G22D 2Q11	G22D 3Q11	G22D 4Q11	Number of Samples	Number of ND's	% ND	ND Treatment
Chloride, dissolved	mg/L	34	38	4	33	32	44	4.6	32	350	200	200	220	120	150	170	190	240	280	300	300	20	0	0.0%	NO ADJ

Tolerance Limit = $x + st[1+(1/n)]^{1/2}$
Confidence Level = 95%

Prediction Limit

Parameter Name	Units	G11D 1Q11	G11D 2Q11	G11D 3Q11	G11D 4Q11	R11S 1Q11	R11S 2Q11	R11S 3Q11	R11S 4Q11	G13D 1Q11	G13D 2Q11	G13D 3Q11	G13D 4Q11	G13S 1Q11	G13S 2Q11	G13S 3Q11	G13S 4Q11	G22D 1Q11	G22D 2Q11	G22D 3Q11	G22D 4Q11	ND Treatment	Mean	Standard Deviation	Number of Samples	T Value	Prediction Limit
Chloride, dissolved	mg/L	34	38	4	33	32	44	4.6	32	350	200	200	220	120	150	170	190	240	280	300	300	NO ADJ	147.08	113.2904121	20	1.7291	348